

BENCHMARKS

VOLUME 6 NUMBER 3

NORTH TEXAS STATE UNIVERSITY

MARCH 1985

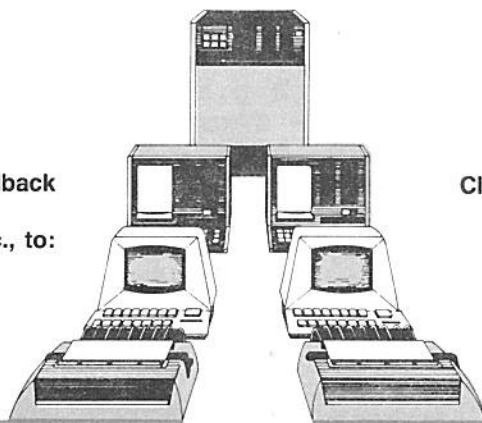
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BENCHMARKS Reader/User feedback is encouraged.

Send all letters, suggestions, etc., to:
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Services Available to Users of the NTSU Computing Facilities

The NTSU Computing Center is located in the Information Sciences Building, Room 119. Telephone: (817) 565-2324. HELP DESK phone: 565-4050.

INFORMATION AND ID CODES - Carolyn Goodman

BENCHMARKS QUESTIONS/CONTRIBUTIONS, ETC. - Claudia Lynch

STATISTICAL/RESEARCH SUPPORT - George Morrow, Scott Barber,
Claudia Lynch, Dave Molta, Panu
Sittiwong

STUDENT PROGRAMMING PROBLEMS - CSCI Department, Room 542A, GAB
BCIS Department, Room 152, BA

JCL PROBLEMS - Help Desk

PRE-RESEARCH COUNSELING - George Morrow, Scott Barber, Dave Molta,
Panu Sittiwong, Claudia Lynch

DATA ENTRY & KEYPUNCH - Betty Grise

TEST SCORING & ANALYSIS - Betty Grise

DISK SPACE PROBLEMS - Carolyn Goodman

PASSWORD AND OPERATING SYSTEM PROBLEMS - Help Desk

ADMINISTRATIVE APPLICATIONS - Coy Hoggard

COMMUNICATION/TERMINAL PROBLEMS - Help Desk

PRINTOUT RETRIEVAL - RJE Operators

Spring Computing Hours

Computing facilities will be open during the following hours throughout the Spring Semester (not applicable to holidays):

Computing Center RJE:	7 a.m. Monday - Midnight Saturday Sunday, Noon - Midnight
ISB 110 Terminal Area:	Monday - Thursday, 7:30 a.m. - Midnight Friday, 7:30 a.m. - 6 p.m. Saturday, 9:00 a.m. - 7 p.m. Sunday, 2 p.m. - 10 p.m.
College of Business:	Monday - Thursday, 8:15 - Midnight Friday, 8:15 - 8 p.m. Saturday, Sunday, 12:15 p.m. - Midnight
Room 550C, GAB:	Saturday, CLOSED Sunday, 2 p.m. - 11 p.m. Monday - Thursday, 8 a.m. - Midnight Friday, 8 a.m. - 8 p.m.

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*   N E W   P O L I C I E S ,
*   P R O C E D U R E S ,
*   A N D   O T H E R
*   I M P O R T A N T
*       S T U F F
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Spring Break Hours

Following is the computing schedule for Spring Break:

<u>Location</u>	<u>Dates</u>	<u>Status</u>
GAB 550C	March 15	OPEN 8 am - 5 pm
	March 16, 17	CLOSED
	March 18-21	OPEN 11 am - 8 pm
	March 22	OPEN 11 am - 5 pm
	March 23	CLOSED
	March 24	OPEN 2 pm - 11 pm
ISB 110	March 15	OPEN 7:30 am - 6 pm
	March 16	OPEN 9 am - 7 pm
	March 18-22	OPEN 10 am - 8 pm
	March 23-24	CLOSED
BA	March 15	OPEN 8:15 am - 8 pm
	March 16-20	CLOSED
	March 21	OPEN 8:15 am - Midnight
	March 22	OPEN 8:15 pm - 8 pm
	March 23, 24	OPEN 12:15 pm - Midnight
Computing Center RJE	March 15	CLOSE Midnight
	March 16	OPEN 8 am - Midnight
	March 17	OPEN Noon - Midnight
	March 18-23	OPEN 8 am - Midnight
	March 24	OPEN Noon - Midnight

Supercomputer Presentation Scheduled

A presentation entitled "Architecture and Application of Supercomputers," is scheduled for March 27 from 3 - 5 p.m. in the General Academic Building, Room 206. The presenter is Dr. Tony Warnock of Cray Research, Inc., Los Alamos National Laboratories. The sponsor for the lecture is the Research Computing Committee of NTSU and the Association of Higher Education of North Texas Area Universities (AHE).

This presentation represents one of the steps in joint discussions among personnel from area universities and industries concerning the need for, value of, and arrangements necessary to

supply access to supercomputing capability in the North Texas area. For further information, parking permits, and reservations, please contact: Jane Newcomer, NTSU Office of Research and Academic Grants, (817) 565-3940.

Computing Center Spring Short Courses, Part Two

The Computing Center is offering its second series of short courses this semester. These courses will be held in Room 110 of the Science and Technology Library (ISB) unless otherwise noted. Following are the dates and times for each course. Please pre-register to attend. Only 20 people will be admitted per section. Courses marked with * require knowledge of the MUSIC Context Editor. THE COMPUTING CENTER RESERVES THE RIGHT TO CANCEL COURSES WITH LESS THAN 5 PEOPLE SIGNED UP.

1. Three separate 2-hour introductory sessions on the MUSIC interactive operating system, using the 3270 Protocol Converter to do FULL-SCREEN EDITING on MUSIC.

Monday, April 1	:	9 - 11 a.m.	Instructor: Janice Green
Tuesday, April 2	:	9 - 11 a.m.	Instructor: Janice Green
Wednesday, April 3	:	6-8 p.m.	Instructor: Janice Green

2. A 2-hour introductory session on SPSS-X.*

Friday, April 5	:	8:30 - 10:30 a.m.	Instructor: Dave Molta
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3. A 2-hour introductory session on SAS.*

Thursday, April 4	:	8:30 - 10:30 a.m.	Instructor: Scott Barber
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4. A 2-hour introductory session on Waterloo/SCRIPT.*

Thursday, April 4	:	6 - 8 p.m.	Instructor: Claudia Lynch
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5. A 2-hour session on Job Control Language (JCL) - To be held in the Academic Computing Services Conference Room ISB 123 (in the Computing Center Office Area).

Wednesday, April 3	:	8:30 - 10:30 a.m.	Instructor: George Morrow
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A sign-up sheet for these short courses is included at the end of this issue.

The Responsibilities of Computer Use

Like most of life's other privileges, the privilege of being a computer user at NTSU brings with it some responsibilities. These responsibilities involve two common things: courtesy and sense.

Every computer user must comply with the following

MARCH, 1985

statement, which is signed by individual ID-code holders and Instructors who apply for classroom ID-codes. It is the Instructor's responsibility to inform their students about this when they pass out the ID-codes.

I hereby certify that to the best of my knowledge and intent, the computing services obtained through the use of this request form:

1. Will be limited to justifiable computing support of NTSU/TCOM activities;
2. Will not be used for commercial purposes or personal financial gain.

I understand that unauthorized use of other userids or attempts to gain access to another user's programs or data files will result in loss of computing privileges and possible disciplinary or legal action.

This means, among other things, that people who have classroom ID-codes, cannot use them for non-classroom work. Recently, there have been several instances of student violations with regard to the use of classroom ID-codes. These violations have included such things as using the computer to perform tasks in connection with an off-campus job, and using the laser printer to produce resumes. BE FOREWARNED ... For a student, loss of computing privileges, which could happen when you do such things, could make it impossible to complete classroom assignments, or even an entire degree program. Furthermore, abuse of computing resources could result in the restriction of computing services for the entire academic community.

After-hours Output Retrieval for Students in Wheelchairs
By Lynne Adkins, I/O Operations Supervisor

This procedure is to assist students in wheelchairs to obtain output printed on the Laser or Remote 3 printers after regular office hours.

During regular office hours (8 am - 5 pm, Monday through Friday), students in wheelchairs may enter through the Computing Center front office (Rm 119 ISB) and go through the hallway around to the Output boxes to retrieve their output.

After 5 pm on weekdays and at all times on weekends, this office is closed. At these times, follow the steps below.

1. ON MUSIC using REMOTE 3: Jobs routed to this Remote have been printed when OSJR responds "JOB NOT FOUND". Proceed to '3' below.
2. ON MUSIC using LASER: Wait about 45 minutes after OSJR responds "JOB NOT FOUND", then call 3890 to see if

your job has printed.
 ON VAX using LASER: Wait about 50 minutes after submitting your job with the LASER command, then call the Output Operator at 3890 to see if your job has printed.

3. When your job has printed, tell the Output Operator (at 3890)
 - A. Your name,
 - B. How many jobs you'll be picking up,
 - C. Filing type specified on the output,
 - D. That you're on your way over to pick up the output.
4. Come over to the ISB main entrance. Buzz the key-operated buzzer* by the far right door, and come into the hallway by the door to ISB room 119.

The Output Operator on duty will have retrieved your printouts after your phone call. (S)he will listen for the buzzer as a signal to bring the printouts to you at the door of rm. 119, as soon as he is able to do so.

* TO OBTAIN A KEY TO THE BUZZER: See Handicapped Student Services, in the Dean of Students Office.

New File Management Policy for OS/MVS Disks By Bob Brookshire, Manager of Academic Computing

Beginning at the end of Spring semester, 1985, several changes will be made to the way in which the academic disk volumes, ACAD00, ACAD01 and ACAD02 are managed. These changes will be very important to users who have files on these disks.

ACAD01

On or about May 13, 1985, the volume ACAD01 will be reformatted. This means that all data and programs stored on this disk will be destroyed. Those of you who have data or programs stored on this disk that you wish to keep beyond May 13 should copy them onto tape. You can then restore your files to the disk after May 20. The volume ACAD01 is to be used solely for instruction by faculty and students in the College of Business. College of Business faculty and graduate students who have data and programs used for research should copy their files to ACAD00. Faculty and students from other colleges should remove their files from ACAD01 as soon as possible. The procedure we will use to reformat the disk volume will allow no exceptions. All files on the disk will be destroyed. This procedure will be repeated at the end of every long semester, and just before the beginning of every Fall semester.

ACAD00 AND ACAD02

On or about May 13, 1985, all files on the volumes ACAD00 and ACAD02 which have not been accessed for the previous 365 days

will be deleted. Users who have data and programs on these volumes that are infrequently accessed should copy these files to tape. Once again, this procedure will be repeated at the end of every long semester, and before each Fall semester.

A UTILITY PROGRAM TO MOVE DATA SETS

You may use the utility program MOVEDATA to move a sequential or partitioned data set from OS disk to tape, or from one OS disk to another. To access this program, type MENU in the *GO mode on MUSIC. Users with VSAM or ISAM data sets are responsible for writing the appropriate programs to move their files.

CALL 3270, The Sensible Alternative

Protocol Converters are available over the Local Area Network to access operating systems such as MUSIC and CMS running on the AS/8040 computer. These protocol converters allow ASCII terminals (VT100s, MIMES, TELEVIDEOS, etc.) to emulate IBM 3270 type terminals, thus allowing FULL SCREEN EDITING capabilities. The protocol converters can be accessed from the network by typing:
CALL 3270

You may have noticed that the port addresses on the LAN numbered 8040 and higher are often full (i.e., you can't get a session). While this condition exists for the 8040 ports, the 3270 ports are underused. It would be wise, therefore, to learn to use the FULL SCREEN editor so that you could take advantage of the free ports on 3270.

The Computing Center has offered numerous courses on using the Full Screen Editor on MUSIC, and this semester, all the introductory courses on MUSIC will be taught using this facility. Alternatively, you may consult BENCHMARKS, Volume 4 Number 5 for more information on the protocol converters and their use, the Full Screen Editor section of the MUSIC Manual, and/or come by the reception area of the Computing Center and pick up a copy of the Quick Reference Sheet on "Using the 3270 Protocol Converter at NTSU."

Processing Tapes on the NAS/8040

By Claudia Lynch, BENCHMARKS Editor and Foreign Tape Liaison

Tape processing on the NAS/8040 is accomplished through a tape management system (TMS), which provides users with protection against inadvertent loss of tape data and manages the many tapes in the Computing Center's tape library. In order for the TMS to be effective, it must control all the tapes that are being processed. To accomplish this, people who own tapes that they want to access must have them copied onto a tape controlled by the TMS. The only exception to this rule is if you want to access a foreign tape (a tape that doesn't belong to the TMS) "just one time." This might be the case if you want to copy

files from a tape onto disk. In all other cases, you cannot access data contained on a tape unless it resides on a TMS volume. The OPER help file on MUSIC has a good overview of the Tape Management System here at NTSU. To read it, enter HELP OPER while logged-on to MUSIC and follow the instructions.

Following are some procedures to follow to process tapes on the NAS/8040:

CONDITION	ACTION
Copy Tape onto TMS	Bring tape and any documentation about it to the Computing Center Reception Area (ISB 119). Fill out the BLUE form for copying Foreign tapes onto the TMS. Deliver the form to Claudia Lynch.
Copy TMS volume to personal tape	Find out what the requirements are for tapes at the location you are planning to process your tape, if this is the reason you are copying the TMS volume. Bring your personal tape to the Computing Center Reception Area (ISB 119). Blank tapes may be purchased here, also. Fill out the GREEN form for copying TMS volumes onto Foreign Tapes. Deliver the form to Claudia Lynch.
Copy files from personal tape onto Disk	Bring your tape to the Computing Center high security area (GAB 5th floor - take the northeast staircase). Run your job (remembering to send a SURF message telling the operator to process your tape - enter SURF on MUSIC and follow the instructions). When you are through, and are sure your job worked, return to the high the high security area to pick up your tape.

NOTE: If you have a non-labeled tape and don't want to write dataset names, the Tape Librarian will assume it is O.K. with you to name your files FILE001 to FILE00N.

Five Easy Steps for Printing MUSIC/SCRIPT Files, and More By Steve Minnis, Manager of Technical Support

1. In your file to be printed, include at the top of the file:

```
/FILE 8 N(filename) NEW(REPL) LRECL(133)
      /\          /\
      |           |_ Only needed for wide prints
      |_ Any file name
```

```
/INCLUDE SCRIPT
```

2. Execute your file-to-be-printed and respond to the message:

```
MUSIC SCRIPT ... Enter OPTIONS or 'HELP' ?   with:
OUTPUT=8
```


3. If your output is to be printed on the LASER, enter:

```
INDENT filename,3
```

```
  /\
```

```
  |_ Name of file specified in the /FILE line of step 1.  
     If you want the left margin over more, change the  
     3 to the number of spaces you want to indent (3  
     is the default).
```

4. Set up a file (perhaps called PRINT) containing the following:

```
/PARM NAME='your name',TYPE='student or faculty',  
      PROJNO='your MVS ID-code',MVSPW='your MVS password',MORE  
/INC PTPCH
```

NOTE: The /PARM specifications cannot continue on to another line.

5. When you are ready to send your file to the printer, enter:

```
PRINT
```

```
  /\
```

```
  |_ Or whatever name you gave the file created in step 4.
```

Change any information that you need to change, remembering to put FILE= whatever filename you used in the /FILE line in step 1.

You can use this scheme to print non-script files also, by leaving the /INCLUDE SCRIPT line out of step 1, and eliminating step 3 (unless you want your output indented).

Turnaround on the Laser Printer

By Lynne Adkins, I/O Operations Supervisor

The Hewlett-Packard 2680A Laser Printer provides high quality computer-generated output with the flexibility of different character styles (fonts) and various character per inch settings. This printer serves users from the 6650 and 8040 mainframe computers, and the two VAX minicomputers. The Laser prints an average of over 5.5 million lines printed each week - more than ten times as much as any other Computing Center printers.

The HP 3000 system through which the Laser printer is accessed serves all users on a first-come, first-served basis. All jobs routed to the Laser go through the steps described below:

When you route a print job to 'REMOTE 4' or 'LASER' using MUSIC, the VAX, COM-LETE, or CMS, your job is placed on an output queue for Remote 4. At this point a MUSIC user in OSJR would receive information similar to the following:

```
JOB    299    ID32PRT    OUTPUT READY - ROUTE 4    200 LINES
```

When your job is next in line to print, it is sent down a communications line from the mainframe to the HP 3000 system. Each mainframe has a communications line to the HP, so jobs spool to this system simultaneously from the 6650 and 8040.

After a print job has been sent to the HP 3000 system via this communications line, the mainframe no longer has any record of the job. At this point, a MUSIC user would receive "JOB NOT FOUND" when querying OSJR for the status of his job. Keep in mind that at this point the job has NOT printed - it will be from 45 minutes up to several hours before it prints, depending on the volume and length of jobs already transferred to the HP 3000 system.

When your job is transferred to the HP 3000 it is placed on an output queue for the Laser printer. Jobs from both mainframes are placed on this queue in the order received - neither system has "priority". When your print job is first in line on this HP system queue, will be printed on the Laser.

The apparent delay for users of the Laser printer is caused by the number of jobs waiting to print on the HP system. Since this system receives output from multiple Host computers (the 6650, 8040 and VAXEN) it runs almost constantly during the day and night printing output as it is received. For a MUSIC user, a job may spool over to the HP system in five minutes or less. However, once transferred to the HP this job may be 125th in line, which means it will be at least an hour or more before it prints, depending on the size of the jobs preceding it.

To avoid waste of computer resources and needless increase of turnaround on the Laser, follow these guidelines:

Use the Laser printer only when you really need it - otherwise:

- Route output to REMOTE1 (BA) or REMOTE3 (ISB) if a Laser print font is not necessarily needed, and for "test runs" of class projects. (Turnaround is usually QUICKER at these remotes, also).
- Thoroughly proof read and test jobs before requesting copies.
- Abide by the limit of 4 copies printed by any method. Use copy machines or the Copy Centers for further copies.
- Allow enough waiting time before you go to the ISB to retrieve your Laser output - 45 minutes at the least. Toward the end of the semester (last 4 - 5 weeks) it usually takes several hours.
- Check the "LASER PRINTER STATUS" board kept in the ISB Output window for a current estimate of Laser turnaround time.

SPSS-X Back to Old Release

The time ran out on the release of SPSS-X that were were testing, so the version you get when you execute SPSSX is once again release 2.0. The OLDSPPSX procedure is no longer valid. The next release of SPSS-X, which were were testing, should be here by April.

The ICPSR Summer Program

By Bob Brookshire, Manager of Academic Computing and ICPSR
Official Representative

The Inter-university Consortium for Political and Social Research (ICPSR), of which NTSU is a member, offers a summer training program in statistics, data analysis and computer use at the University of Michigan. This program is open to graduate students (for credit or as auditors) and to faculty (as Visiting Scholars). The course offerings are diverse, intensive and cover both the most widely used data analysis techniques and those methods that are "on the leading edge." All the workshops involve "hands on" applications of the techniques covered, and include access to the vast data collections of the Consortium. Instructors in the program come from institutions across the U.S. and from Canada, including the Wharton School, UCLA, Brandies, the University of Georgia, Ohio State University, Northwestern University, Dartmouth and Yale, as well as Michigan. The instructors represent such disciplines as Statistics, Mathematics, Business, Psychology, Sociology, Political Science, and History. Tom Madron, Manager of Computing Services here at NTSU, is giving a workshop entitled "Current Microcomputer Applications."

For more information, you can contact me at the Computing Center (565-2324). I have brochures, posters, admissions forms, booklets, etc. Former summer program students who will be happy to talk to you about their experiences include myself, John Todd and Neal Tate in Political Science, and Susan Eve in Sociology.

Computer Systems Monthly Report: An Executive Summary
By Richard A. Harris, Director of Computer Systems

JANUARY 1985

GENERAL

The first NTSU on-line registration was completed in January. Overall, this was a very successful first production run of a major component of a very complex system. The Technical Support, Information Systems, Operations, and Data Entry support people worked long hours under extreme pressure and have been commended for their efforts.

Although the computer and communications systems performed extremely well, the registration software placed a much greater load than expected on the administrative computer system (NAS 6650). Efforts are in progress to improve the efficiency of the software and registration procedures, but it appears that we will continue to have serious capacity problems during registration periods until some major adjustment is made.

It must be recognized that we have absolutely no margin for error or major computer/communications failure, which is certain to occur sooner or later. A two hour outage of an overloaded system could become a procedural disaster for the current registration process. We are now rethinking our short and long term equipment upgrade options. For example, we may want to acquire a new academic system as soon as possible and use the current academic system (NAS 8040) for administrative support.

The TAGER microwave link was put into service in early January. The link to the NTSU cable system and the data communications capabilities should be implemented later this year.

We experienced a flood in the computer area prior to registration (in connection with installation of the TAGER microwave antenna on the roof) and a fire after registration (in the battery room). University Police and Physical Plant personnel were commended for our quick recovery (within twenty-four hours) from both exciting events. Computer operations personnel were also commended for their actions to minimize damage and evacuate the building.

Over 200 students, faculty and staff attended the Computing Center's semesterly open house and toured the computer rooms.

ACADEMIC SERVICES

A total of 1,542 students and faculty used the NAS 8040 computer in January. This is a 20% increase from a year ago and a 101% increase from January 1983. Terminal connect hours for this IBM-compatible system were 9,452; up 46% from last January.

A total of 523 students and faculty used the general purpose VAX computers. This is a 54% increase from January 1984. Terminal connect hours for January were 4,041; up by 137%. All 40 available VAX ports were typically busy from 10:00 a.m. till 6:00 p.m. with peak load response times of about 5 seconds.

Approximately 10 people from the University of Texas at Arlington Computer Center User Services Group toured the NTSU computing facilities.

Academic Computing literature was distributed to TCOM faculty.

OPERATIONS

The NAS 8040 academic time-sharing system (MUSIC) uptime for January was 96.2%, with downtime of 22.5 hours primarily due to

City power outage and subsequent UPS battery fire.

The NAS 6650 administrative on-line system (COM-LETE) uptime was 98.7%.

Over 27.75 million lines were printed on central printers during January, with over 66% being on the Laser printer.

CBS Mechanical reinforced the existing air conditioning ducts in the GAB computer rooms, which should resolve long term cooling capacity problems.

The Data Entry Section worked overtime nights and Saturday to enter registration data for the Student Accounting Section of the Controller's Office. In addition to the routine administrative and research data entry, 99 hours of word processing on the TI micro was completed for four academic projects. Faculty evaluations for eleven departments were processed on the new NCS optical scanner.

TECHNICAL SUPPORT

The primary activity of the Technical Support Division was support of the new on-line registration implementation. The communications group worked 12 hour days, 6 days a week for two weeks to install and test equipment and software.

INFORMATION SYSTEMS

Again, the registration system (SIMS) required significant overtime effort of the entire Information Systems Division to successfully implement on-line registration. The SIMS project will continue to require a major support effort for all teams for the remainder of the fiscal year.

In addition, end-of-year processing for both NTSU and TCOM payroll systems was successfully completed.

It now appears that TCOM payroll and accounting systems will continue to run on the NTSU computer for at least the remainder of this fiscal year. Additional programming staff is needed both at TCOM and NTSU to support this change in plans.

A Tax Deduction for Your Microcomputer? The Rules Have Changed*
By Dr. Patricia C. Elliott, C.P.A. and Tax Accounting teacher at the Anderson School of Management, the University of New Mexico.

On July 18, 1984, the President signed the Tax Reform Act/Deficit Reduction Act of 1984, which significantly altered the tax treatment of personal computers placed into service after June 18, 1984. Computers purchased and used prior to June 18 are still subject to the old tax rules.

NEW RULES FOR DEDUCTIBILITY

The new law requires that adequate, concurrent records documenting business use must be kept. This probably means that a log must be kept documenting the use of the computer every time you sign on. Tax return preparers must obtain the taxpayer's written certification that such records were kept with regard to any deduction taken on the tax return.

The toughest requirement is for employees seeking to deduct their use of a computer in conjunction with their employment. They can deduct their computer usage only if the computer is both (a) for the convenience of the employer and (b) a required condition of employment. The new rules do not apply to computers used exclusively on the employer's business premises. Thus, a deduction for a home computer by an employee is almost impossible.

Note that the computer used in a consulting business is not covered by the employee rules; however, the record-keeping requirements above and the business-use test below must be met.

NEW LIMITS ON DEDUCTIONS

For you to be eligible to take investment tax credit, ACRS (i.e., accelerated) depreciation, of the \$5,000 expensing provisions of ACRS, the new law requires that more than 50% of the use of your computer be for business purposes. If business use is 50% or less, you are limited to straight-line depreciation over 12 years. The twist is that Section 212 use (for investment properties or tax records) no longer counts as business use. Thus, if you use your computer 40% for your consulting business, 20% for investment and tax record keeping, and 40% for personal use, you cannot take ACRS, investment tax credit, or the expensing provision.

For example, if your computer cost \$10,000 and was used as the percentages above, you have failed the greater-than-50% test and are limited to straight-line depreciation over 12 years for the business and investment use. Note that the 20% investment use counts in calculating the deduction but not in the 50% test. Thus, your deduction is 60% of \$10,000 divided by 12 or \$500 for the year. Under the old rules you could have taken \$5,000 as an immediate expense, plus \$68 of investment tax credit. Alternatively, you could have taken \$600 of investment tax credit and \$855 of depreciation. The reduction in the tax benefit is significant.

Even if you can meet the greater-than-50% test, a trap awaits you later. If, in any future year, your business usage drops to 50% or less, you must recapture all prior investment tax credit and accelerated depreciation. This means that all prior investment tax credit must be repaid and that all depreciation previously taken in excess of straight-line depreciation must be added to your income in the year that business usage falls to 50% or less.

This will be true even if business usage drops in only one future year, then exceeds 50% in all years after the drop.

SUMMARY

The new law makes it practically impossible for an employee to get the favorable ACRS and investment tax credit on a home computer. The new law does not eliminate favorable treatment on computers used in business (i.e., a consulting business or a sole proprietorship) or on computers acquired before June 18, 1984. A much more modest straight-line depreciation deduction can be taken for computer use related to investments and taxes, and recapture may loom on the horizon for the unwary.

*Courtesy of the University of New Mexico Computing Center.

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*   O P E R A T I O N S   *
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Backup Schedule for OS/MVS

OS/MVS disk packs (academic and administrative) are backed up daily, Tuesday through Saturday, from 4-6:30 a.m., and Sunday from Midnight to 3 a.m. A backup of all the operating systems and their contents is done once every two weeks at some low activity period over a weekend.

NAS/8040 Performance Statistics for February

SYSTEM	SCHEDULED OPERATING HOURS	PLANNED MAINT. HOURS	PLANNED PRODUCTION HOURS	UNPLANNED MAINT. HOURS	PRODUCTION HOURS ACHIEVED	SYSTEM UPTIME
VM/SP3	672	0.00	672.00	3.45	668.55	99.5%
MUSIC	672	22.18	649.82	4.43	645.39	99.3%
MVS/JES2	672	0.00	672.00	4.96	667.04	99.3%
COMPLETEA	672	0.00	672.00	5.55	666.45	99.2%

The AS/8040 CPU and the AS/7360 DASD achieved 100% uptime.
 System Uptime = (Production Hrs Achieved) / (Planned Production Hrs)
 Production Hrs Achieved = (Planned Production) - (Unplanned Maint.)
 Scheduled Operating Hrs = (Planned Maint.) + (Planned Production)
 MUSIC Planned Maintenance Hours include 22.18 hrs system backup.

Lost productivity is calculated as the greatest amount of elapsed time that any one of the production systems was unavailable for scheduled operation. Lost productivity hours were contributed to

by the following key causes:

Miscellaneous

1. Undetermined Causes for Systems Restarts	2.44 HOURS
2. MVS/JES2 System Tuning/Improvements	0.28
3. Emergency Power down of all Equipment due to Loss of Air Conditioning .	3.28

TOTAL	6.00 HOURS

GRAND TOTAL	6.00 HOURS

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*           *
*   T E C H N I C A L   *
*   S U P P O R T       *
*           *
* * * * *

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Program Hit Parade

The following programs were used the most frequently during the month of February.

TOP TEN PROGRAMS IN TERMS OF FREQUENCY OF RUNS

<u>Program</u>	<u>Description</u>	<u>Number of Runs</u>
1. IEWL	Linkage Editor	19611
2. PGM=*.DD	Compiled Program	19362
3. IKFCBL00	VS COBOL Compiler	8983
4. IFOX00	System Assembler	8892
5. PTPCH	Dataset Lister	7504
6. SCRIPT	Waterloo/SCRIPT	5850
7. SASLPA	SAS	5478
8. IEBGENER	IBM Utility	3240
9. IEBPTPCH	IBM List Utility	1999
10. LOADER	System Loader	1976

TOP TEN PROGRAMS IN TERMS OF CPU SECONDS USED

<u>Program</u>	<u>Description</u>	<u>CPU Seconds</u>
1. PGM=*.DD	Compiled Program	102872
2. SASLPA	SAS	39545
3. IFOX00	System Assembler	29901
4. IKFCBL00	VS COBOL Compiler	14794
5. PTPCH	Dataset Lister	10139
6. SCRIPT	Waterloo/SCRIPT	9349
7. IEWL	Linkage Editor	7691
8. LOADER	System Loader	5274
9. IEKAA00	FORTTRAN H	1147
10. IEBGENER	IBM Utility	1097

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*           *
*   C O M M U N I C A T I O N S   *
*           *
* * * * *

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Dialing Up NTSU Computers Over the Telephone

Phone numbers for the local area network are:

300/1200 BAUD: (817) 565 - 3300
 3499

300 BAUD: D/FW METRO 429 - 6006

The numbers that will accept either 300 or 1200 baud communications have an autobaud feature that requires the user to hit the <RETURN> key repeatedly until the receiving modem can determine the appropriate baud rate. The METRO telephone number is for 300 baud communications only. After a communications link has been successfully established, the user will receive the # prompt. At this point, it will be necessary to issue the appropriate CALL command to connect with a computer.

CALL 8040 will connect with the 8040
8050 (on which you can access MUSIC)
8060

CALL 8300 will connect with the 8040 at 300 baud

CALL 3270 will connect with the 8040 through the 3270
3280 protocol converter

CALL A780 will connect with VAX system A
CALL B780 will connect with VAX system B

CALL 2000 will connect with the HP-2000 computer

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*           *
*   M U S I C   *
*           *
* * * * *

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MUSIC Backup Hours

A message will be sent to all users signed on to MUSIC approximately 10 minutes before backups are begun. It will be in the form * * MUSIC SHUT DOWN AT xxxx AM - SCHEDULED BACKUP **. To find out the backup hours while signed on to MUSIC, enter HELP HOURS. The following backup schedule is currently in effect:

Tuesday	3 a.m. (for about 3 hours)	Weekly backup
Wednesday - Saturday	4 a.m. (for about 2 hours)	Daily backup
Saturday	Midnight (for about 2 hours)	Daily backup

MUSIC Usage: 1983 - 1985

<u>YEAR</u>	<u>NUMBER OF FILES</u>	<u>NUMBER OF ID-CODES</u>	<u>SPACE USED IN K</u>
SPR83	17959	1298	117503
FAL83	23389	1855	144060
SPR84	22474	1551	142932
FAL84	30449	2055	205857
SPR85	30113	1982	205590

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* * * * *
*           *
*  V A X E N  *
*           *
* * * * *

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VAX Backup Schedule

Incremental backups of both VAX systems are performed Monday through Thursday at 5 p.m. Any files that have been created or changed are backed up. Users do not have to log out, but any files that are open at the time of the backup will NOT be backed up.

Full backups of both systems are done every Friday at 5 p.m. Again, users do not have to log out, but any files that are open will NOT be backed up.

A "stand alone" backup of both systems is done on the last working day of the month. During this time, all system software, as well as user files, are backed up. The systems must be taken down for this backup, which will usually not last more than 1/2 hour. All users that are logged on will be warned of the impending backup, and must log out.

NOTE: No backups are taken on the weekends. Requests for restoration of files should be made via MAIL to the username OPERATOR.


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*   H P - 2 0 0 0   *
*           *
* * * * *

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HP-2000 Backup Schedule

Routine system backups are scheduled to be performed at the following times:

8 a.m. Monday through Friday for approximately 20 minutes;
4 p.m. Friday for approximately 1.5 hours.

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*   I N F O R M A T I O N   *
*       S Y S T E M S       *
*           *
* * * * *

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NAS/6650 Performance Statistics for February

SYSTEM	SCHEDULED OPERATING HOURS	PLANNED MAINT. HOURS	PLANNED PRODUCTION HOURS	UNPLANNED MAINT. HOURS	PRODUCTION HOURS ACHIEVED	SYSTEM UPTIME
MVS/JES2	672	0.00	672.00	7.53	664.47	98.9%
COMPLETEA	273	0.00	273.00	7.38	265.62	97.3%
ADABASA	672	14.40	657.60	13.12	644.48	98.0%

The AS/6650 CPU and the AS/7360 DASD achieved 99.8% uptime. ADABASA'S planned maintenance hours includes 14.40 hours for system backup maintenance. Please consult the NAS/8040 Performance Summary for an explanation of cell entries. It can be found under the OPERATIONS section of this newsletter.

Lost productivity is calculated as the greatest amount of elapsed time that any one of the production systems was unavailable for scheduled operation. Lost productivity hours were contributed to by the following key causes:

CPU, Tape, and Disk Subsystems (NAS)

1. Memory Board Failure in Main Storage 1.30 HOURS

Miscellaneous

1. Undetermined Causes for System Restarts	3.57 HOURS
2. MVS/JES2 System Tuning/Improvements	2.85
3. ADABASA Program Tuning/Improvements	3.39
4. COMPLETA Program Tuning/Improvements	0.26
5. Emergency Power Down of all Equipment due to Loss of Air Conditioning	3.50

TOTAL	13.34 HOURS

GRAND TOTAL	14.84 HOURS

Registration Form for Computing Center Short Courses

Please complete this form and return it AS SOON AS POSSIBLE if you wish to attend any of the short courses listed below. You may also register over the phone by calling 565-2324.

NAME: _____ PHONE: _____

DEPT: _____

I wish to attend:

Introduction to MUSIC

- ☐ Monday, April 1, 9-11 a.m.
- ☐ Tuesday, April 2, 9-11 a.m.
- ☐ Wednesday, April 3, 6-8 p.m.

Introduction to SAS

- ☐ Thursday, April 4, 8:30-10:30 a.m.

Introduction to SPSS-X

- ☐ Friday, April 5, 8:30-10:30 a.m.

Introduction to Waterloo SCRIPT

- ☐ Thursday, April 4, 6-8 p.m.

Introduction to JCL

- ☐ Wednesday, April 3, 8:30-10:30 a.m.

PLEASE RETURN TO:

Academic Computing Services
The Computing Center
NT Box 13495
North Texas State University
Denton, TX 76203

Get a "Subscription" to BENCHMARKS

BENCHMARKS is a vital link between the NTSU Computing Center and the users of our facilities. It is important for all users of the computing facilities to maintain a file of these newsletters because they contain materials which will periodically update existing documents as well as information and suggestions on uses of OS/MVS, MUSIC, the VAX 11/780's, the HP-2000, and other resources available to NTSU students and faculty. To facilitate the dispersal of BENCHMARKS, *** FREE *** subscriptions are now available. To receive yours, send the following information to us either by "snail mail" (the post office or campus mail) or electronically, through the MAIL facility on MUSIC.

Name _____

Mailing Address _____

PLEASE GIVE A CAMPUS ADDRESS (NOT BOX) IF POSSIBLE! - It's Cheaper !!

PLEASE RETURN TO:

Academic Computing Services
The Computing Center
NT Box 13495
North Texas State University
Denton, TX 76203